Bluebloqs Circular Water System
PDEng position in Civil and Environmental Engineering

Department/faculty: Civil Engineering and Geosciences
Level: Master degree
Working hours: 38 hours per week
Contract: Initially a 1-year contract, with a possible 1-year extension (2 years total)
Salary: To be agreed upon
Deadline for application: Until filled
Start of program: May 1, 2019

Field Factors

Introduction

Would you like to extend your knowledge, practical work experience and get a professional doctorate degree in the water sector in only two years' time? The faculty of Civil Engineering and Geosciences of Delft University of Technology (TU Delft) offers a new type of doctorate program called PDEng in Civil and Environmental engineering. During the PDEng program, you will find a solution for a practical, integrated and complex problem in cooperation with a (water) company. You study on avaerage 2 days per week at the TU Delft and apply your learnings 3 days per week on the project at the water technology company Field Factors in collaboration with TU Delft.

The Project

Urban areas across Europe are increasingly facing flooding due to peaks of rainfall, as well as water shortage as a result of longer periods of drought. Since 2016, the startup Field Factors has been working on the development of Bluebloqs: a nature-based solution for decentralised water management in urban areas, avoiding flooded streets and guaranteeing freshwater availability. By locally collecting, treating and storing stormwater through an integrated circular water system, stormwater can be reused to meet the local freshwater demand in times of drought.

The Climate KIC Demonstrator project Bluebloqs Circular Water System advances circular economy business model solutions by re-designing the value chain of urban water management and supply. Four demonstration projects will be implemented in Flanders, The Netherlands and Spain, in close collaboration with water companies, water authorities and end users. The project aims to accelerate the urban transition towards a decentralised grid of circular water systems, making cities climate resilient. Bluebloqs combines innovative bio-filtration and deep infiltration technologies through a modular system for stormwater treatment, storage and reuse. Collected urban stormwater run-off is treated by means of bio-filtration techniques, combining slow sand filters and vertical flow constructed wetlands. The purified water is stored in the subsurface via infiltration wells, from where it can be recovered for different urban applications: e.g. irrigation, industrial processes or combating urban heat.

Job Description

Your job will consist of designing and engineering the system for the different demonstration projects, developing testing and measurement programs, and coordinating the tests and data processing. You will use the results to design a transformative upscaling strategy at system level, with regard to the technical, social, environmental, and financial aspects.

You will collaborate with engineers at Field Factors, and process operators of water utilities, municipalities and technology suppliers in The Netherlands, Belgium and Spain; and you will be part of the TU Delft Technical Coordination Team.

Location

Most of the work will be at the TU Delft and at Field Factors office in Delft, with frequent visits to the demonstration sites.

Requirements

We seek candidates with the following qualifications:

- A master degree in civil, environmental engineering or environmental sciences
- Affinity with biofiltration techniques, particularly sand filters or constructed wetlands
- Aspiring a career in the industry
- Excellent command of English and preferably Dutch
- Excellent communication skills
- Driver's license

Conditions of employment

TU Delft offers:

- A customizable compensation package; a discount for health insurance and sport memberships and a monthly work costs contribution
- Flexible work schedules
- An International Children's Centre offers childcare and an international primary school
- Training to improve English competency
- Compulsory and elective courses suitable for the project
- Proper guidance for the project from TU Delft Sanitary Engineering staff
- A stimulating working environment both at TU Delft and at the pilot location

Information and application

Please visit www.ceg.tudelft.nl/pdeng-ce for more information. For any additional information, you are also welcome to contact:
Amir Haidari, phone: +31 (0)15 – 27 87337, e-mail: a.h.haidari@tudelft.nl

To apply for this position, please send a filled application form (https://www.tudelft.nl/en/ceg/education/postgraduates/pdeng-civil-and-environmental-engineering/admission-application/) and all required documents mentioned on the application form to PDEng-CEG@tudelft.nl.

Deadline for application: Until filled
Start of program: May 1, 2019

TU Delft